	er ID 1117 ry 20, 2014 3:58	.⊿5 PM	451-047 11747	*111	1747*					^	Page 1
tem ID: Revision ID:	D3451-047	B 1	11144	Accept	*N900	040	100)* s	etup Sta	rt *N	S1*
tem Name:	Handle And Lock	-Down Assembly					i		Sto	p *\	S2*
Start Date: Required Date:		tart Qty: 5.00 Req'd Qty: 5.00	*5* *5*		Cust Item l Customer:	D:				1.4	. 12
Reference:	Process Plan:	MK.	Date: 14-1-20			ate:		R	un Sta	~1 <i>\</i> 1	R1*
	QC:		Date:	SPC (Y/N):	D:	ate:				* *N	R2*
Sequence ID/ Work Center II		peration escription		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revisio	on Nbr									
D3451	Rev A										
100				0.00		-					A.I
100 Large Fab	La	arge Fab Memo		0.00		•		_5_	-E		14.01.31
arge Fab		Weld as pe	er dwg PB67-43001								14.01.31
110	Qe	C9- Inspect visual pe	r QSI004- Fusion Welds	0.00							
11 0 ^{QC}		Memo		0.00				5	Idroi	<i>1</i> -31	DAS
Quality Control											9-89
											DAS
120	Q	C5- Inspect part com	pleteness to step on W/O	0.00				_			9 9-89
120 oc		Memo		0.00				(2)	14-0	1.31	·

Quality Control

DQA:			Date:		"								TRAG
QA Closed:			Date:			WORK ORDER NON-	-CC	ONFO	RMANCE / UPDATE		ork Order up	date only	AEROSPACE
QA Closed.			Dutc.								•		
Work Orde	er:					DISPOSITION		·	AGA	INST DE	PARTMENT/	PROCESS	
Part N	lo.					Rework Scrap Use-as-is Suspected Unapproved		Thern	Skid-tube Cross Machining Small noforming Finis Large Fab Compo	l Fab		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root					Desci	ription of work order update	Ī	nitial	Action		Sign &	·	
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved							FAI	UIT CA	FEGORY				
Landi	nø G					General	17	OLI CA	ILOOKI	V			
Landi		Bending Centre No Cracks Crimp/Kir Cuffs Crushing Heat Trea Inspectio Marks/Ch Turning S	nk/Ripple at n Strip in natter	/Wave Tube		Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspect Instruct Misalia Mislaba Misrea Off-set	ion Incomplete/Unqualified tions Incomplete/Unclear gned/off center eled d	1	Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ci ssing Vrong	Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other
I		Waye/Tu	ist in Tuk	10		Fit/Function		Out of	Seguence				

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Work Orde Monday, Januar				*11-	1747*							Page 2
Revision ID:	D3451-047 Handle And La	ock-Down Assembly		Accept	*N900	040	100)*	Setup	Star Stop	1.71	S1*
Start Date: Required Date: Reference:	1/20/2014 1/31/2014	Start Qty: 5.00 Req'd Qty: 5.00	*5* *5*		Cust Item :	ID:						
Approvals:	Process Plan	n:	Date:	Tooling: SPC (Y/N):		ate:			Run	Start Stop	^IVI	R1* R2*
Sequence ID/ Work Center II 130 *120* HandFinish Hand Finishing)	Operation Description Chemical Conversion Co	at per QSI005 4.1	Set Up/ Run Hours 0.00	Tool ID	Tool # DAS 9 9-89	Plan Code	Accep Qty	t Re Qt	ject y	Reject Number	Insp. Stamp
140 ★1 ▲ ↑ Powdercoat Powder Coating	,	Green Sandtex(Ref:4.3.5 MIII 77 Memo START TIM	11:15	0.00 0.00 OVEN TEMPERATUI	RE:			5	\$	<u> </u>	4-2-3	DAS

DAS 30 9-89

0.00

0.00

150

150

Quality Control

QC3- Inspect Part Finish

Memo

DQA:			Date:											TRAC
						WORK ORDER NON	-CC	ONFO	RMANCE / U			101		AEROSPACE
QA Closed:			Date:								W	ork Order up	date only	
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS	
	-					Rework	٦		Skid-tube	Crosstube			Water Jet	Engineering
Part N	lo.					Scrap	1]		Machining	Small Fab		Pro	d. Eng. Coor.	Quality
	•					Use-as-is	1	i	noforming	Finishing		ŧ	re/Packaging	Other
NCR N	lo.					Suspected Unapproved	1		Large Fab	Composite	-		Supplier	1 1
	•					· · · · · · · · · · · · · · · · · · ·	•							
Root		, ,			Desci	ription of work order update	Ī	nitial	Ac	tion		Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	QC Inspector
Design														
Doc/Data														!
Equip/Tooling										·				
Handling/Pre														
Material														
Operator														
Offset/Setup														
Process									i					
Supplier														
Training														
Transport														
Unapproved					<u> </u>		<u> </u>						1	<u> </u>
							FA	ULT CA	TEGORY	· · · · · ·				
Landi		ı			_	General		1	_			1		٦, ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ،
		Bending			-	Bend	-	4	Program		Ŀ	Outside Dim	 	Pressure/Forced
		Centre No	ot Concer	ntric	-	BOM/Route	\vdash	Grain			┝	Over/Under	 	Set-up
	-	Cracks	1 /5: 1		⊢	Broken/Damage/Defect	\vdash	Hardwa			-	Part Incorre	<u>├</u>	Temperature/Cure Weld
		Crimp/Kir	nk/Ripple	/Wave	-	Burrs	\vdash	4	ion Incomplete/U	•	┝	Part Lost/M		
	<u> </u>	Cuffs				Contamination	-	-1	tions Incomplete,		_	Part Moved		Wrong Stock Pulled
	Crushing					Countersink	\vdash	-	gned/off center		\vdash	Positioned V		Other
	Heat Treat Inspection Strip in Tube					Cut Too Short	\vdash	Mislab			<u> </u>	Power Loss/	onige	Totilei
	_	1		rube		Drawing Drill Holos	\vdash	Misrea Off-set						
	<u> </u>	Marks/Ch			 	Drill Holes	\vdash	4	Calibration					
	\vdash	Turning S Wave/Tw			\vdash	Finish Fit/Function	\vdash	4	Sequence					· · · · · · · · · · · · · · · · · · ·
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Wo	rk	Order	ID	111747	
7 T U	<i>,</i>	viuci	11/	111/4/	

111747

Page 3

Monday, January 20, 2014 3:58:45 PM Item ID: D3451-047 Accept *N900040100* Setup Start **Revision ID:** Stop Handle And Lock-Down Assembly Item Name: *5* Start Date: 1/20/2014 Start Oty: 5.00 **Cust Item ID: Required Date: 1/31/2014 Rea'd Otv:** 5.00 Customer: Reference: Run Start Process Plan: Date: Tooling: Approvals: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Reject Accept Insp. Work Center ID Description Run Hours Code Qty Qty Number Stamp 160 0.00 Small Fab *160* Small Fab 0.00 Memo Small Fab 1- assemble rubber handle as per dwg PB67-43001 DAS 27 170 QC5- Inspect part completeness to step on W/O 9-89 14-2-4 *170* OC 0.00 Memo Quality Control Identify as per dwg & Stock Location: 1072 180

120

Packaging Packaging

Memo

0.00

5/ 14-2-4

DQA:			Date:						_				DART
						WORK ORDER NON	-CC	ONFO	RMANCE / L				AEROSPACE
QA Closed:			Date:							<u> </u>	Vork Order u	pdate only	
Work Orde	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
			·			Rework			Skid-tube	Crosstube	7	Water Jet	Engineering
Part I	lo.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	•		•			Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR I	۱o.					Suspected Unapproved			Large Fab	Composite		Supplier	
Root					Desc	ription of work order update		nitial	l Ac	ction	Sign &	 	1
Cause		Date	Step	Qty		or non-conformance		ief Eng	l .	cription	Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling											ŀ		
Handling/Pre													
Material													
Operator													
Offset/Setup													
Process													
Supplier					Ì								
Training													
Transport			İ										
Unapproved													1
							FA	ULT CA	TEGORY				
Landi	ng (1				General	_	1		г		_	-
	ļ	Bending				Bend	_	•	Program	1	Outside Din	<u> </u>	Pressure/Forced
		Centre No	ot Concer	ntric	\perp	BOM/Route	匚	Grain		L	Over/Under	-	Set-up
	<u> </u>	Cracks			<u> </u>	Broken/Damage/Defect	\vdash	Hardwa			Part Incorre	 	Temperature/Cure
	_	Crimp/Kir	nk/Ripple	/Wave	<u> </u>	Burrs	<u> </u>	1	ion Incomplete/L	· · · · · · · · · · · · · · · · · · ·	Part Lost/M		Weld
i	<u> </u>	Cuffs			 	Contamination		4	tions Incomplete,	-	Part Moved		Wrong Stock Pulled
	_	Crushing			<u> </u>	Countersink	-	-1	gned/off center	` -	Positioned		٦
	Heat Treat					Cut Too Short	<u></u>	Mislab		L	Power Loss,	/Surge	Other
	Inspection Strip in Tube					Drawing	<u></u>	Misrea					
	_	Marks/Ch			\vdash	Drill Holes	<u></u>	Off-set					: .
	<u> </u>	Turning S			<u> </u>	Finish		4	Calibration				
	1	Wave/Tw	ist in Tul	be		Fit/Function		Out of	Sequence				

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Work Orde Monday, Januar				*111	1747*							Page 4
Item ID: Revision ID:	D3451-047			Accept	*N900	040	100)*	Setup	Start	1.7	S1*
Item Name:		ock-Down Assembly								Stop	*N	S2*
Start Date:	1/20/2014	Start Qty: 5.00	*5*		Cust Item 1	D :						
Required Date:	1/31/2014	Req'd Qty: 5.00	*5*		Customer:							
Reference:			• •									
Approvals:	Process Pla	ın:	Date:	Tooling:	D:	ate:			Run	Start	*N	R1*
	QC:		Date:	SPC (Y/N):	Ds	ate:				Stop	*N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accep Qty	t Rej Qty		Reject Number	Insp. Stamp
*190		QC21- Final Inspection -	Work Order Release	0.00						,	402	،

0.00

Memo

QC

Quality Control

MLJ 1402-05 Dru-02-04

DQA:			Date:						_				TRAC
						WORK ORDER NON-	-CC	ONFO	RMANCE / UPD				AEROSPACE
QA Closed:			Date:							Wo	ork Order up	date only	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT/	PROCESS	
Part N	-					Rework Scrap Use-as-is Suspected Unapproved		Thern	Machining solutions of the state of the stat	Crosstube Small Fab Finishing omposite	ł	Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root					Desci	ription of work order update		nitial	Action		Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descripti	on	Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved		·					FΔI	ШТ СА	TEGORY				
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Landi		Bending Centre No Cracks Crimp/Kir Cuffs Crushing Heat Trea Inspection Marks/Ch Turning S	nk/Ripple nt n Strip in natter	/Wave Tube		Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspect Instruct Misalia Mislaba Misreaa Off-set	ion Incomplete/Unqua tions Incomplete/Uncl gned/off center eled d		Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ci ssing Vrong	Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other
Í	\vdash	Waye/Tw				Fit/Function	\vdash	4	Seguence		•		

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Monday, January 20, 2014 3:58:44 PM

Work Order ID:

111747

Parent Item:

D3451-047

Parent Item Name:

Handle And Lock-Down Assembly

Start Date: 1/20/2014

Required Date: 1/31/2014

Start Qty: 5.00

Required Qty: 5.00

Comments

IPP Rev: A 08-06-27 new issue DD verified by:ec

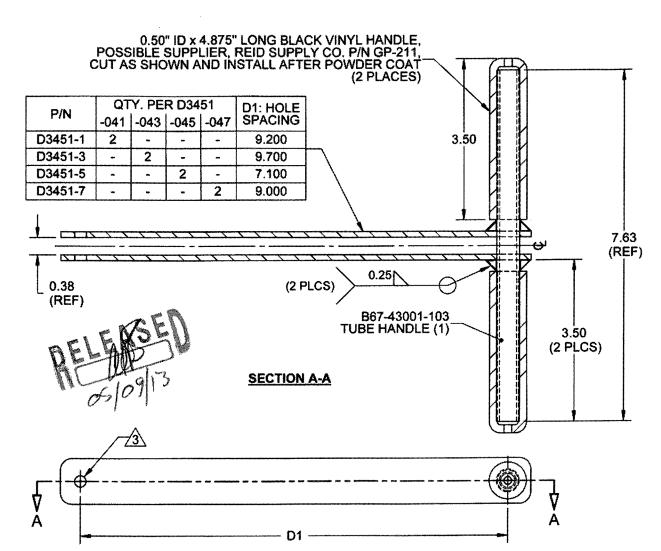
Component Item ID/ tem Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty		Pate Status ssued
03451-7 Fube Handle Arm		Manufactured	No			100	Each	8.0000	2	10	1/2	14.01.30
					1 718 819	Loc Qty 8 8		oc Code		<u> </u>		
GP-211 Rubber Handle		Purchased	No			100	Each	115.0000	2	10	FF	04-02
				Location		Loc Qty	<u>La</u>	c Code	-			
				ST283		15						
				123	937	15		~		5		
•				ST284		100		~				
				M <u>1</u>	<u> 27975</u>	100				5	11	
PB67-43001-103 Tube Handle		Manufactured	No			100	Each	20.0000	1	5	1214	1.01.30
				Location		Loc Qty	<u>L</u>	c Code				
				Mezz		4						
				. 525	70	4						
				Mezz2 B	111719	16				4_		
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DQA:			Date:										TRAC
QA Closed:			Date:			WORK ORDER NON	-CC	ONFO	RMANCE / UPE		ork Order up	date only	AEROSPACE 1
QA Closed.			Date.								ork Order up	date only	
Work Orde	er:					DISPOSITION			,	AGAINST DE	PARTMENT	PROCESS	
Part N	•			** * .	_	Rework Scrap Use-as-is Suspected Unapproved		ł.	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Desci	iption of work order update		nitial	Actio	n	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descrip	tion	Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved													
			<u> </u>				FA	ULT CA	TEGORY				
Landi	Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Inspection Strip in Tube Marks/Chatter Turning Sequence					General Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspect Instruct Misalia Mislaba Misrea Off-set	ion Incomplete/Unquitions Incomplete/Unquitions Incomplete/Unquitions Incomplete/Unquitions Incomplete Incompl		Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ct ssing Vrong	Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other
[Г	4	-			Fit/Function		Out of	Sequence				

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			1		
DESIG	b	DRAW	BY	DART AERO HAWKESBURY, C	SPACE LTD DINTARIO, CANADA
	CHECKED APPR			D3451	REV. A SHEET 1 OF 2
DATE	05.0)8.25		HANDLE & LOCK	SCALE -DOWN ASS'Y 1:2
Α	0	5.08.25		NEW ISSUE	





D3451-041/-043/-045/-047 HANDLE & LOCK-DOWN ASS'Y

D3451-041 SUPERSEDES PREMIER P/N B67-43001-41 D3451-045 SUPERSEDES PREMIER P/N B67-43001-39 D3451-047 SUPERSEDES PREMIER P/N B67-43001-55

NOTES:

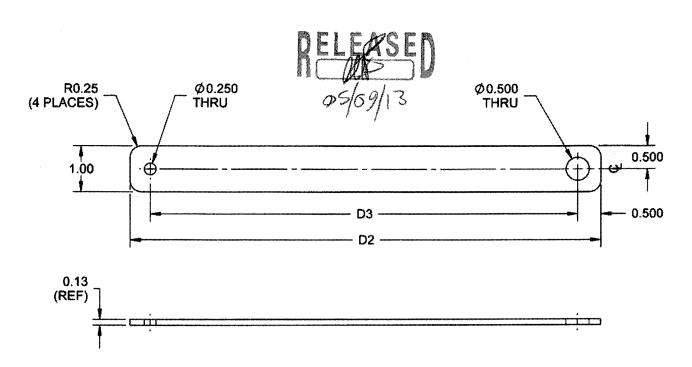
- 1) WELD PER DART QSI 004
- CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 MASK BEFORE PAINTING.
- 4) FINISH: POWDER COAT PAINT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
 5) PART IS SYMETRICAL ABOUT CENTER LINE.
 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 7) ALL DIMENSIONS ARE IN INC.

- 8) BREAK ALL SHARP EDGES 0.005 TO 0.010

DQA:			Date:										TRACT
						WORK ORDER NON	-CC	ONFO	RMANCE / UPDATE				AEROSPACE
QA Closed:			Date:			<u></u>				W	ork Order up	odate only	
Work Order						DISPOSITION			AGAINS	T DE	PARTMENT	/PROCESS	
VIOIN OTUC	· —				_	Rework	1		Skid-tube Crosstube	e 🗀	1	Water Jet	Engineering
Part No).					Scrap	1		Machining Small Fal		Pro	d. Eng. Coor.	Quality
	_					Use-as-is	1	Thern	noforming Finishin	g	Rec/Sto	re/Packaging	Other
NCR No	o					Suspected Unapproved]		Large Fab Composite	e]	Supplier	
Root	Т	· · ·			Desc	l ription of work order update	Н	nitial	Action		Sign &		<u> </u>
Cause	1	Date	Step	Qty		or non-conformance		ief Eng			Date	Verification	QC Inspector
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	→	Bending			-	Bend	\vdash	1	Program	\vdash	Outside Dim		Pressure/Forced
1 ⊢	┥	Centre No	ot Concer	ntric	-	BOM/Route	-	Grain		\vdash	Over/Under	 	Set-up
-		Cracks	l./ptl	h.u	-	Broken/Damage/Defect	-	Hardwa		-	Part Incorre		Temperature/Cure Weld
-		Crimp/Kin	ік/кірріе	/wave	-	Burrs	-	1 '	ion Incomplete/Unqualified	\vdash	Part Lost/M		_
-	Crushing					Countarink	\vdash	4	tions Incomplete/Unclear	\vdash	Part Moved Positioned V		Wrong Stock Pulled
 -	Crushing Heat Treat					Countersink Cut Too Short	-	Mislab	gned/off center	\vdash	Power Loss/		Other
-	Inspection Strip in Tube					Drawing	\vdash	Misrea		L	Trower ross/	ouige [Jouren
	Marks/Chatter					Drill Holes	-	Off-set					
	Turning Sequence					Finish	\vdash	4	Calibration				
 	Wave/Twist in Tube					Fit/Function		-	Sequence				



DESIGN	DRAWN BY		OSPACE LTD ONTARIO, CANADA
CHECKED #	APPROVED	D3451	REV. A SHEET 2 OF 2
DATE 05	.08.25	TITLE HANDLE & LOCH	SCALE K-DOWN ASS'Y 1:2



P/N	D2: CUT LENGHT	D3: HOLE SPACING			
D3451-1	10.25	9.200			
D3451-3	10.63	9.700			
D3451-5	8.00	7.100			
D3451-7	10.00	9.000			



D3451-1/-3/-5/-7 TUBE HANDLE ARMS

D3451-1 SUPERSEDES PREMIER P/N B67-43001-303 D3451-5 SUPERSEDES PREMIER P/N B67-43001-301 D3451-7 SUPERSEDES PREMIER P/N B67-43001-101

NOTES:

1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.125)
2) PART IS SYMETRICAL ABOUT CENTER LINE.
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES
5) BREAK ALL SHARP EDGES 0.005 TO 0.010

DQA: Date:			. The second se							TRAGE			
WORK ORDER NON-CONFORMANCE / UPDATE										AEROSPACE			
QA Closed:			Date:							Wo	ork Order up	date only	
Work Order:			DISPOSITION			AGAINST	DE	PARTMENT	PARTMENT/PROCESS				
Work Orac	-				_	Rework			Skid-tube Crosstube			Water Jet	Engineering
Part N	lo.					Scrap			Machining Small Fab			d. Eng. Coor.	Quality
				Use-as-is			moforming Finishing		Rec/Store/Packaging		Other		
NCR No.					Suspected Unapproved			· H			Supplier		
Root	Root Desc				Desc	iption of work order update Initial Action			Sign &				
Cause		Date	Step	Qty		or non-conformance	1	ief Eng	Description		Date	Verification	QC Inspector
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Doc/Data													
Equip/Tooling												,	
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Operator						S							
Offset/Setup							Ì						
Process													
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Training							ļ						
Transport	_												
Unapproved			1		<u> </u>		<u> </u>						
							FAI	ULI CA	TEGORY				
Landi		1				General Bend	_	ا داند ا	Program	·]Outsida Dim	onsions F	Pressure/Forced
		Bending		\vdash	BOM/Route	_	Grain	- Ingrain		Outside Dimensions Over/Under tolerance		Set-up	
	Centre Not Concentric				Broken/Damage/Defect	\vdash	4		\vdash	Part Incorrect		Temperature/Cure	
	Cracks				Burrs		Hardware Inspection Incomplete/Unqualified		\vdash	Part Lost/Missing		Weld	
	Crimp/Kink/Ripple/Wave Cuffs			-	Contamination	-	1 '	tions incomplete/Unclear	\vdash	-		Wrong Stock Pulled	
	Crushing				-	Countersink	-	Misaligned/off center		H	Positioned Wrong		_ wrong stook r uned
	Heat Treat			Cut Too Short	\vdash	Mislabeled			Power Loss/Surge		Other		
	Inspection Strip in Tube		-	Drawing		Misread		ш	1, 39. 2330,				
	Marks/Chatter			Drill Holes		Off-set							
	Turning Sequence			Finish		Out of Calibration							
	Wave/Twist in Tube			Fit/Function		1	Sequence				-		